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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,683	03/17/2004	Yoshiyuki Tsuji	250502US0X	1876
22850	7590	03/26/2008	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			OHERN, BRENT T	
			ART UNIT	PAPER NUMBER
			1794	
			NOTIFICATION DATE	DELIVERY MODE
			03/26/2008	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/801,683	<b>Applicant(s)</b> TSUJI ET AL.	
	<b>Examiner</b> BRENT T. OHERN	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-13,15,16,18,19 and 26-31 is/are pending in the application.
- 4a) Of the above claim(s) 8-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,12,13,15,16,18,19 and 26-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claims***

1. Claims 1-2, 4-13, 15-16, 18-19 and 26-31 are pending with claims 8-11 withdrawn and claims 29-31 new.

### **WITHDRAWN OBJECTIONS**

2. The objections to claim #7 of record in the Office Action mailed 26 September 2007, page 3, paragraph 7 have been withdrawn due to Applicant's amendments in the Paper filed 27 February 2008.

### **REPEATED REJECTIONS**

3. The 35 U.S.C. 103 rejections of claims 1-2, 4-7, 12-13, 15-16, 18-19 and 26-28 as being unpatentable over Tsuji et al. (US 6,524,668) in view of Sarno (US 4,403,955) and Hill (US 2,947,114) are repeated for the reasons of record in the Office Action mailed 26 September 2007, page 3, paragraph 8.

### **NEW REJECTIONS**

#### ***Claim Rejections - 35 USC § 103***

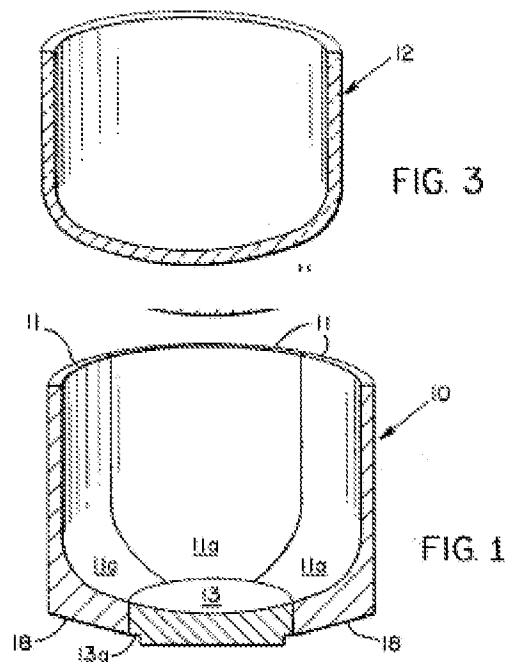
4. Claims 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuji et al. (US 6,524,668) in view of Sarno (US 4,403,955) and Hill (US 2,947,114).

Tsuji ('668), Sarno ('955) and Hill ('114) teach the crucible discussed above, however, fail to expressly disclose wherein the fine grooves exist on more than 50% of the outer surface of the crucible.

However, Sarno ('955) teaches wherein it is well known in the art that the outer surfaces of silica glass crucibles have a roughened outer surface as a result the

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unfused sand present on the outer surface of the crucible (See col. 3, ll. 26-35 and FIGs 1 and 3 wherein the crucible #12 having an rough outer surface is placed into receptacle #10.).



Therefore, it would have been obvious to one having ordinary skill in the art at the time of Applicant's invention that Tsuji's ('668) silica glass crucible would either have the above surface coverage as taught by Sarno ('955) or it would have been obvious to one having ordinary skill in the art the time Applicant's invention was made, through routine optimization, to roughen the outer surface of Tsuji ('668) as taught by Hill ('114) in order to provide the above surface coverage for adhering the members together.

### **ANSWERS TO APPLICANT'S ARGUMENTS**

5. In response to Applicant's arguments (*p. 8, para. 5 to p. 9, para. 4 of Applicant's Paper filed 27 February 2008*) that since Hill ('114) does not teach a silica glass crucible it is improper to cite Hill ('114) as prior art, it is noted that Hill ('114) is cited for its teachings that either the outer surface of the crucible or the inner surface that it is inserted into are roughened. Whether or not the crucibles in Hill ('114) are silica glass do not matter since Hill ('114) is not cited for teaching the composition of the crucible.

6. In response to Applicant's arguments (*p. 9, para. 5 to p. 10, para. 2 of Applicant's Paper filed 27 February 2008*) that since Sarno's ('955) surface is rough due to the properties of the silica glass, it can not have the claimed surface roughness, it is noted that Sarno ('955) is just cited for a silica glass having a roughened outer surface which is what Applicant is claiming and there is not any issue with regard to this cited teaching.

7. In response to Applicant's arguments (*p. 10, para. 3 to p. 11, para. 3 of Applicant's Paper filed 27 February 2008*) that since Tsuji ('668) does not teach the claimed surface roughness the rejection should be withdrawn, it is noted that Tsuji

('668) teaches a silica glass crucible and a graphite susceptor and not the claimed surface properties and this is why the secondary references are cited.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRENT T. OHERN whose telephone number is (571)272-0496. The examiner can normally be reached on Monday, Tuesday and Thursday, 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brent T O'Hern/  
Examiner, Art Unit 1794  
March 15, 2008

/Elizabeth M. Cole/  
Primary Examiner, Art Unit 1794